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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/697,395	10/30/2003	Rudolf J. Hofmeister	15436.247.11.1	7465
22913	7590	11/15/2007	EXAMINER	
WORKMAN NYDEGGER 60 EAST SOUTH TEMPLE 1000 EAGLE GATE TOWER SALT LAKE CITY, UT 84111			SEDIGHIAN, REZA	
			ART UNIT	PAPER NUMBER
			2613	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/697,395

Applicant(s)

HOFMEISTER ET AL.

Examiner

M. R. Sedighian

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-14 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/30/03 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

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1. This communication is responsive to applicant's 9/7/07 amendments and remarks. The amendments have been entered. Claims 1-3 and 5-14 are now pending.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 5, and 7-8 are is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,909,848 to Kim et al. in view of U.S. Patent No. 6,631,144 to Johansen et al.

With respect to claim 1, Kim discloses an opto-electric device (102, Fig 1 (photo-electric transducers))(column 1 lines 39-48 (photo-electric transducers)), comprising: a circuit having an automatically selectable data rate (column 4 lines 34-40 (bit rate is automatically selected based on temperature information based on a CPU (181, Fig 2) control signal)) and configured to generate a loss of lock signal when an input data stream has a data rate out of range of an operational rate at which the optoelectronic device is set (column 3 lines 20-27 (if bit rate of converted electrical signal (input data stream) is not consistent with pre-set bit rate, each BICDR outputs a loss of lock signal)), the circuit comprising: a data stream input for receiving the input data stream (Fig 1 (inputted optical signals)); and a data rate select input configured to enable selection and setting of the operational data rate of the circuit (adjust bit rate)(column 4 lines 3-40 (data operational rate is selected by controller (180, Fig 2) which is enabled by comparing an inputted loss of

lock signal and a DC level value representing the bit rate of the output signals form the DMUX (110, Fig 2)); and a controller coupled to the data rate select input and configured to enable automatic adjustment of the operational data rate of the circuit in response to receipt of the loss of lock signal (column 3 lines 20-27 (column 3 lines 20-27 (if bit rate of converted electrical signal (input data stream) is not consistent with pre-set bit rate, each BICDR outputs a loss of lock signal))(column 4 lines 3-12 (said error signal is then sent to CPU (181, Fig 2))(column 4 lines 34-40 (CPU adjusts bit rate in response to said error signal)). Kim fails to disclose ceasing to adjust the selectable data rate once all selectable data rates have been attempted, whether or not the loss of lock signal has ceased. Kim discloses the controller (180, Fig. 2) generate a control signal that is used to adjust the bit rate of the respective bit rate receiver (column 2 lines 37-40, column 3 lines 32-40, column 4 lines 35-40). Kim further discloses the controller recognizes the corresponding bit rate and transduces the variation of the bit rate to an operational bit rate of the corresponding BICDR transmitter (column 5 lines 1-9). Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of invention that a control device such as controller 180 of kim that recognizes the bit rates and that transduces the variation of the bit rate to an operational bit rate of a corresponding BICDR transmitter, can also cease to adjust the selectable data rate once all selectable data rates have been attempted to provide a self-healing bit rate transmission system (Kim, column 2 lines 20-25). Kim further fails to disclose that the circuitry is implemented as an integrated circuit. Johansen, from the same field of endeavor, also discloses a multi-rate transponder system including usage of a clock and data recovery (CDR) circuit (column 5 lines 35-40), a phase locked loop (PLL) based CDR

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circuit (column 6 lines 45-50), and a selectable bit rate (column 5 lines 58-65) all implemented into an integrated circuit (Figures 2 and 3)(column 14 lines 20-27 (integrated receiver/transmitter chip))(column 14 lines 59-63 (integrated circuit)). At the time of invention, it would have been obvious to one of ordinary skill in the art to implement the circuitry as disclosed by Kim into an integrated circuitry format as disclosed by Johansen. The motivation for doing so would have been to minimize hardware requirements and improve reliability of network nodes (column 9 lines 21-26) and to take advantage of certain component reductions such as pin count, die area, and signal coupling (column 14 lines 48-55).

With respect to claim 2, Kim in view of Johansen disclose the opto-electric device as recited in claim 1 (Kim: 102, Fig 1 (photo-electric transducers))(Kim: column 1 lines 39-48 (photo-electric transducers)), wherein the integrated circuit comprises one of: a clock and data recover integrated circuit; a multiplexer/demultiplexer integrated circuit; and a serializer/deserializer integrated circuit (Johansen: column 6 lines 45-50 (PLL based CDR circuit; integrated circuit design))(Kim: 121, 141 Fig 2 (CDR receivers and transmitters))(Kim: column 3 lines 5-9 (bit rate independent clock and data recovery receivers))(Kim: column 4 lines 56-62 bit rate independent clock and data recovery transmitters)).

With respect to claim 3, Kim in view of Johansen disclose the opto-electric device as recited in claim 1, wherein the integrated circuit includes a sub-circuit that provides clock and data recovery for a plurality of data rates (Kim: column 4 lines 38-46 (control signal is sent to bit rate independent clock and data recovery receiver to adjust bit

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rate))(Johansen: column 2 lines 21-34 a CDR circuit comprised within a multi-rate transponder system), the controller (Kim: 180, Fig 2)(Kim: column 3 lines 32-35 (control device))(Johansen: column 4 lines 26-37 (system controller)) being configured to adjust the selectable data rate to each of the plurality of data rates (Kim: column 4 lines 38-40 (CPU 181 generates a control signal to adjust the bit rate))(Johansen: column 9 lines 7-31 (CDR is adapted to provide a selectable nominal bit rate, selected from a plurality of predetermined hit nominal bit rates, this embodiment allows the controller to perform-on-the fly alteration of the current communication protocol supported by the multi-rate transponder circuit)).

With respect to claim 5, Kim in view of Johansen disclose the opto-electric device as recited in claim 1 includes the controller (Kim: 180, Fig 2)(Kim: column 3 lines 32-35 (control device))(Johansen: 200, Fig 1) and the integrated circuit reside together on the same chip (Johansen: 100, 300 Fig 1)(Johansen: column 14 lines 45-55 partitioning between circuit blocks is not limiting for the scope of the invention, circuit blocks can be formed on a common substrate, use common signal coupling and/or common power nets)(Johansen: column 12 lines 54-56).

With respect to claims 7-8, Kim in view of Johansen disclose the optoelectric device as recited in claim 1, wherein the device is compatible with Fiber Channel Protocol (Johansen: column 1 lines 59-64 (the chip set and transponder system should be capable of supporting reception/transmission of several differing communication protocols))(Kim: column 1 lines 21-29 (wherein several fiber channel systems are listed

which have the capability to be compatible with 2 Gb/s bit rates (up to 2.5Gb/s)(ie. Ethernet, escon, fddi, and atm))).

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,909,848 to Kim et al. in view of U.S. Patent No. 6,631,144 to Johansen et al. and further in view of U.S. Patent Application No. 2002/0060824 to Liou et al.

With respect to claim 6, Kim in view of Johansen disclose the optoelectric device as recited in claim 1, however Kim in view of Johansen fail to disclose a rate of about 10 Gb/s as such a data rate was not common at the time of filing of the application submitted by Kim, rather, a 2.5 Gb/s data rate is disclosed. Liou, from the same field of endeavor, discloses an electro-optic with CDR and control module (Fig 1). Liou teaches said module wherein the first serial electrical data stream had a data rate of 10 Gb/s or faster (page 3, paragraph 24)(page 1 paragraph 6). At the time of invention it would have been obvious to one skilled in the art to replace the older laser transmission technology associated with the transponder as taught by Kim in view of Johansen with the electro-absorption modulated FP laser as taught by Liou. The motivation for doing so would have been to achieve a data stream rate of 10 Gb/s and to achieve a superior transmission characteristic exemplified by the eye diagram model (Liou: Page 1 paragraph 6)(Liou: page 3 paragraph 24).


5. Claims 9-14 are allowed over prior art of record.

6. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. R. Sedighian whose telephone number is (571) 272-3034. The examiner can normally be reached on 9 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
**M. R. SEDIGHIAN**  
**PRIMARY EXAMINER**